GAINING A SENSE OF BELONGING

THE BENEFITS OF SAFE ROUTES
PROGRAMS FOR COMMUNITY COHESION





ACKNOWLEDGEMENTS

The New Jersey Safe Routes Program, supported by the New Jersey Department of Transportation, is a statewide initiative with a mission to partner with schools and communities to prioritize and implement opportunities for people to walk, bike, or travel by other wheeled devices. By focusing on improvements to support active travel by youth, we believe we can create conditions that are safe, healthy, equitable, and appealing for all.

The New Jersey Safe Routes Resource Center assists public officials, transportation and health professionals, and the general public in creating safer and more accessible walking and bicycling environments for children in New Jersey through education, training, and research.

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INTRODUCTION

Often cited as one of the benefits of Safe Routes to School (Safe Routes) programs, community cohesion arises when social bonds link members of a locality to one another and to the group as a whole. (Molitor, Rossi, Branton, Field, 2011) These bonds do not develop spontaneously. Rather, cohesion among group members develops from a heightened sense of belonging, teamwork, and interpersonal attraction. (Lieberman and Zimmerman, 2015)

This report explores the ways in which Safe Routes programs help promote and encourage community cohesion. The definition of community cohesion that will be used to frame this discussion "refers to the quantity and quality of interactions among people in a community, as indicated by the degree residents know and care about their neighbors and participate in community activities. It reflects the value of having nearby friends and acquaintances with whom a person can interact and provide physical support if necessary." (Westman, Eriman, and Olsson, 2017)

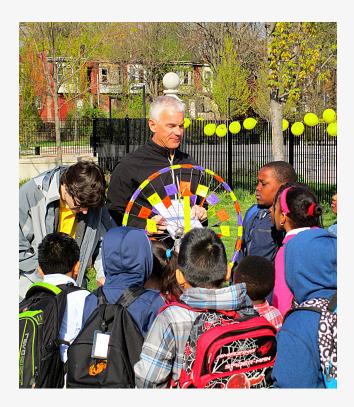
COMMUNITY COHESION IS FURTHER DEFINED BY THE FOLLOWING INDICATORS

- People assisting strangers (such as helping another person find their way or search for a lost item)
- Strangers engaging in spontaneous conversation
- Neighbors cooperating on community projects
- Children playing in public
- Diversity in the public realm, including people of different incomes, ages, cultures, religions, and physical abilities in public places
- Community events and activities that attract diverse participants
- Children, seniors, and people with disabilities traveling independently

A cohesive community is one in which individual members feel a sense of belonging to the community as a whole. Moreover, the bonds between people of different backgrounds enable community members to collectively address economic and race-based inequalities in pursuit of an environment that actively supports diversity. (Zhu, Yu, Lee, and Lu, 2020) Social justice and racial equity are therefore intrinsic components of community cohesion.

SAFE ROUTES PROGRAMS

The following sections of this report describe various Safe Routes initiatives and demonstrate the ways in which community cohesion is encouraged and supported by these programs.



One way to promote community cohesion is through Safe Routes programs, events and activities that promote walking and bicycling, and encourage students to use active transportation to commute to and from school.

In the United States, the Safe Routes program began in the 1990s. (Brachman and Church, 2019) After witnessing the success of pilot programs, the U.S. Congress approved funding in 2005 to implement Safe Routes programs in all 50 states and the District of Columbia.

THE GOAL OF THE PROGRAM IS THREE-FOLD

- To enable and encourage children, including those with disabilities, to walk and bicycle to school
- To encourage a healthy and active lifestyle from an early age by promoting walking and bicycling to school as a safer and more appealing transportation alternative
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools

The Safe Routes program has been effective in increasing rates of active transportation among school children. Nationally, elementary school student participation in Safe Routes programs increased from 14.2 percent in 2006-07 to 21.8 percent a decade later. (Turner, Slater, and Chaloupka, 2014) Children who participate in Safe Routes events tend to walk more subsequent to the events, laying the groundwork for a lifetime of active travel. (Kingham & Ussher, 2007)

The Safe Routes program is primarily focused on children, but parents, schools, and the community as a whole benefit as well. Key Safe Routes elements that promote walking and bicycling, such as walking school buses and satellite dropoff, support community cohesion by encouraging communal physical activity and providing opportunities for social interaction. Community cohesion in turn benefits both children, by supporting increased independence, and parents, by providing a dependable network of people on whom they can rely for support. Community cohesion can also affect the school environment decreasing the incidence of bullying and improving student academic performance and attendance.

Ultimately, increased opportunities for exercise and interaction with neighbors result in greater physical and social health throughout the community.

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BENEFITS FOR CHILDREN

The Safe Routes program focuses on the improvement of children's lives through safe and healthy active travel. Researchers have substantiated the benefits to children from walking and biking. Most notable among them are improved concentration, better academic performance, and improved physical health. In addition to providing health benefits, walking and biking improve the relationship children have with their communities, leading to widespread effects throughout society.

A child's means of commuting to school has a profound effect on their well-being and their connections to the community. (Zhu, Yu, Lee, Lu, and Mann, 2014) Children generally commute to school either by walking, riding a school bus, or riding in a personal vehicle. Over the last several decades, the use of cars as a means of commuting has steadily increased. The for this might reason be social convenience: however, there are unintentional drawbacks to commuting by car.

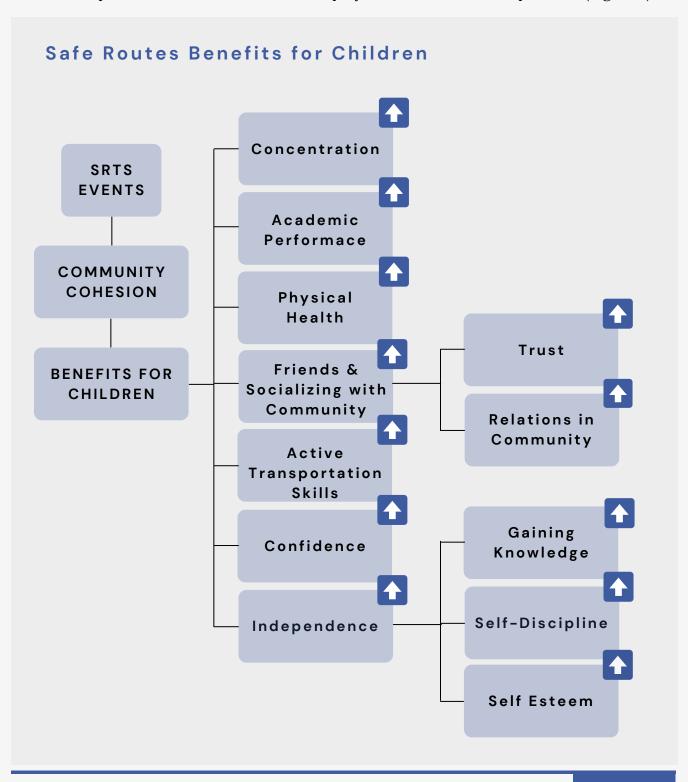


When driven to school, children do not have the opportunity to interact socially with peers and other neighbors. They cannot explore the community on their own, which negatively impacts their ability to meet new people and make friends. (Zhu et al, 2014) Getting to know neighborhood shapes perception of the community. When children walk and travel independently of adults, they are more likely to make new friends and spend time with people they already know, practices which build trust and have a positive impact on relations among community members. (Zhu et al, 2014)

Safe Routes walking and biking programs and activities also help develop children's active transportation skills and increase their confidence. In one study, after participating in a walking to school bus program, young children became more assured of their ability to walk.

As they turned 9-10 years of age, these children wanted to walk to school independently of adults. (Kingham & Ussher, 2007) The study demonstrated that after participating in Safe Routes programs or events, children preferred to walk to community locations other than school whenever possible and wanted to socialize with friends more often. (Kingham & Ussher, 2007) These changes in habit change how students interact with their community, leading to a positive impact on community cohesion and on the students' lives.

The improved relations among children and parents that result from greater independence create a positive feedback loop that leads to further community cohesion. (Lin et al, 2017) For example, parents who view their neighborhoods as more cohesive in terms of trust and familiarity, and more connected in terms of providing several network ties, allow their children higher levels of independent mobility, which in turn leads to a greater sense of community cohesion. Safe Routes initiatives that develop children's active transportation skills and confidence play a crucial role in this process. (Figure 1)



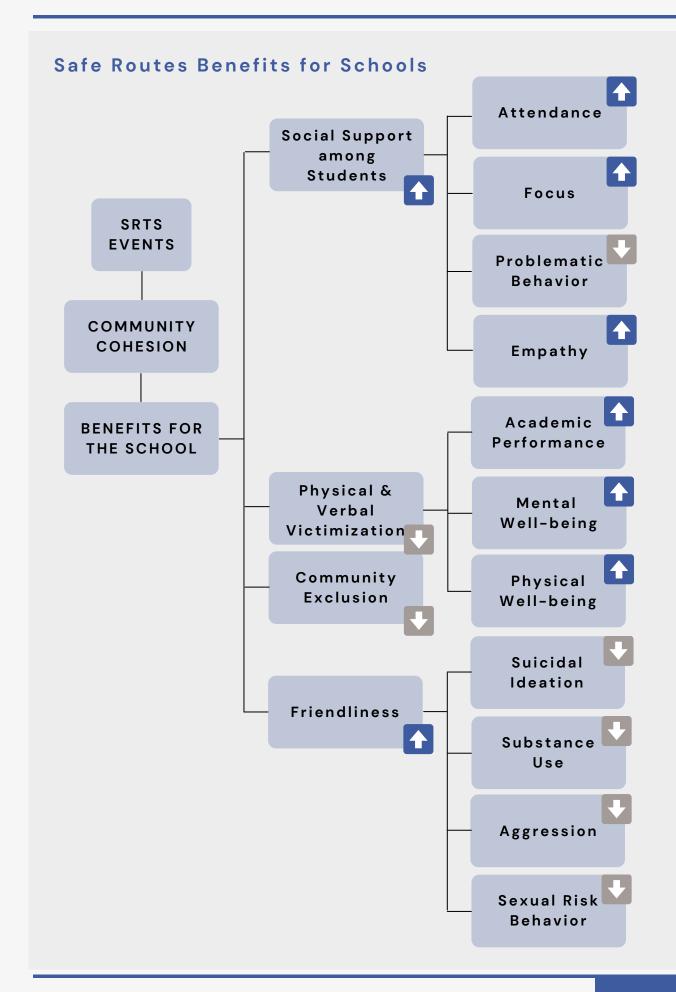
BENEFITS FOR THE SCHOOL

School communities benefit considerably from the Safe Routes program. Cohesion among students outside of school can reduce the incidence of physical and victimization (bullying) verbal community exclusion inside the school. (Springer, Cuevas, Ortiz Gomez, Case, Wilkinson, 2016) Bullying is a systemic problem that affects almost all school districts in the United States. A 2016 report from the National Center for Education Statistics states that 1 in 5 students (20%) are bullied in school. (US 2020) Population Reference Bureau, Given that 50 million students are enrolled in U.S. public schools, the number of affected children is estimated to be a staggering 10 million students. (US Population Reference Bureau, 2020) In 2016, more than 500,000 students skipped school and stayed home at some point to avoid bullying. Ultimately, this lack of attendance has a negative impact on students' academic performance and cohesion among students.

Safe Routes programs can help to address these issues by providing a safe and fun way to get to school, while also ensuring that children arrive on time. More consistent attendance, combined with the increased focus that results from physical activity, can improve students' academic performance. Additionally, Safe **Routes** programs increase community cohesion, which improves social support between students and relates to better learning environments, less problematic behavior, and an increase in empathy. (Oder, 2005)

Safe Routes programs offer students an opportunity to interact outside of a classroom setting. Students are not sorted by intelligence or athletic ability and participate in Safe Routes programs on equal footing in neutral territory. This provides an environment for students who might not normally interact with each other to interact, expanding familiarity among the student population fostering more diverse friend groups. Supportive social relationships in school have a mitigating effect on several adolescent health risk behaviors. When students are friendlier towards each other, they are more comfortable seeking help from each other if the need arises. This social cohesion also reduces occurrences of problems like suicidal ideation, substance use, aggression, and sexual risk behaviors. (Springer et al, 2016)





BENEFITS FOR PARENTS

Although Safe Routes programs focus on children and school communities, parents also benefit from participation in Safe Routes events. These benefits include improved health, strengthened relationships with their children, and the ability to meet and interact with other families outside of school which can build to reliance on community members for assistance.

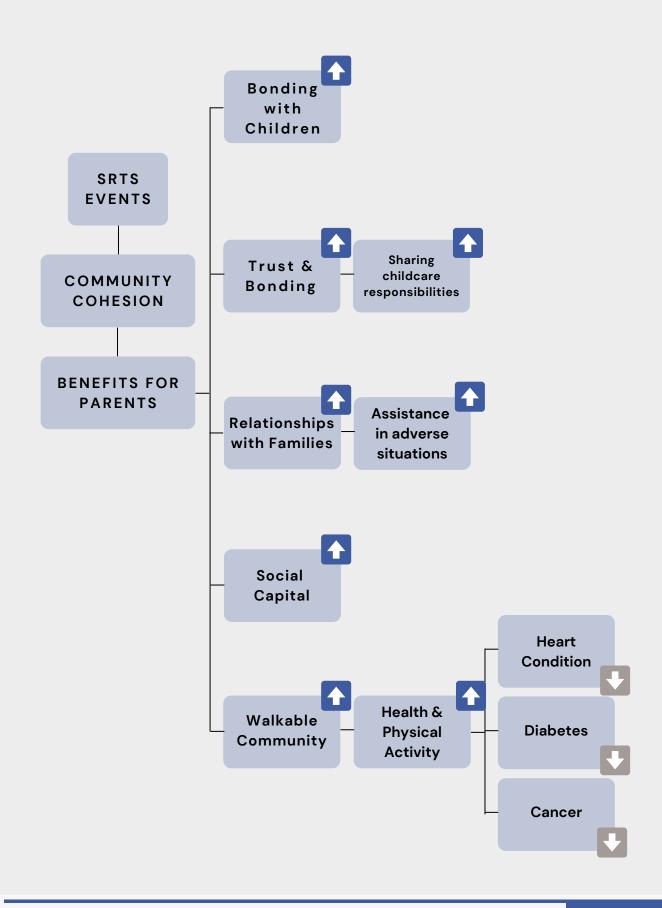
WHEN PARENTS PARTICIPATE
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Likewise, children have the opportunity to become familiar with other parents in the community.

The improved trust that results from these relationships can help parents share the responsibilities of childcare. With deeper relationships, parents can rely members of the community for assistance with children during work-related emergencies. For example, when a parent needs to report early to work, they can drop their child at a fellow Safe Routes program participant's house, who can ensure that the child reaches school safely. (Neuwelt & Kearns, 2006) There have also been recorded instances of children who became separated from their parents at local venues such as malls, recognizing other parents from their walking school bus, and asking for help. (Figure 3)



Safe Routes Benefits for Parents



BENEFITS FOR THE COMMUNITY

Although children and parents are direct beneficiaries of Safe Routes programs, other community members, such as older adults and young adults, benefit from both improved infrastructure and increased community cohesion.



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PERCENT

Increase in active school travel

Infrastructure projects funded through the Safe Routes program improve safety and mobility for all community residents. In New York City, implementation of Safe Routes infrastructure projects resulted in a significant reduction in child pedestrian injuries. (Brachman and Church, 2019) For 48 projects and 53 schools in six states with Safe Routes programs, walking increased by 45 percent, bicycling increased by 24 percent, and all active school travel increased percent following bv 37 implementation of infrastructure improvements. (Candle, 2001)

A long-term analysis of the impact of the California Safe Routes to School program found that living within 250 feet of a Safe Routes infrastructure project, such as a new sidewalk, increased the probability that a child would walk to school. In addition, rates of pedestrian injury within 250 feet of an infrastructure project declined significantly, compared to the area outside the treatment area. (Stewart, Moudon,and Claybrooke, 2014) While Safe Routes infrastructure projects may be targeted toward children, improved infrastructure makes walking safer and encourages walking, not only for children, but for all community members.

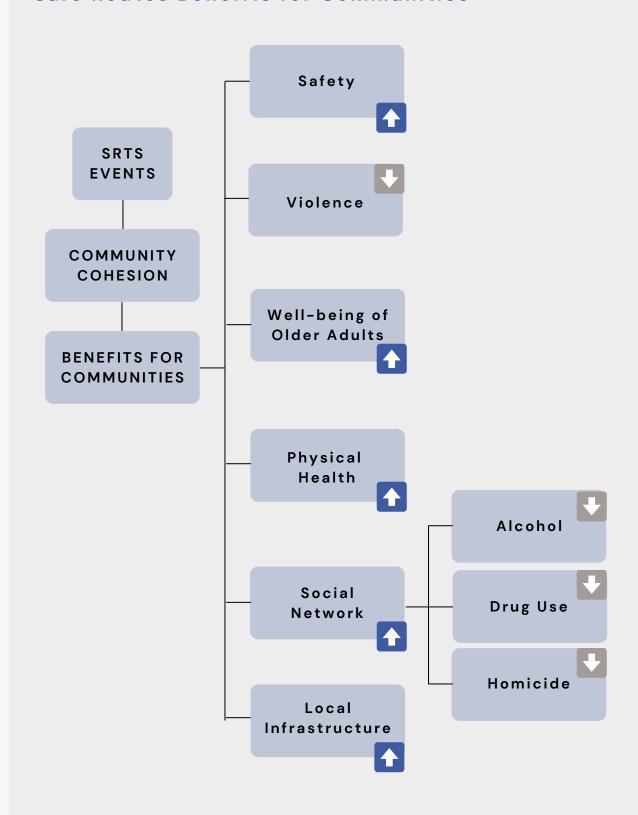
The Safe Routes program helps communities become more walkable and develops bonding among community members, both of which lead to increased physical and social health.

A study comparing the physical activity differences between walkable and lesswalkable communities shows that physical activity among adults increases significantly after moving to a more walkable community; 64.8 percent of the residents reported higher amounts of physical activity with significant increases in weekly walking minutes. (Begert, Muller, and Bless. Furthermore, individuals who reported living in places with greater community cohesion exercised more. Factors such as accountability and trust in neighbors, the availability of help, and the presence of close-knit neighborhoods increased the odds of meeting aerobic exercise guidelines. Physical activity, social interaction, and neighborhood cohesion are mutually reinforcing. (Quin, Wu, Mody, Bushover, Mendez, Schiff, Fabio, 2019)

increased Moreover, community cohesion fosters a sense of belonging in community members and creates climate that allows residents to constructively confront of issues inequality. (Zhu al, 2020) et By encouraging increased walking and bicycling through inclusive programming, the Safe Routes program lays groundwork for greater social cohesion and ultimately enables communities to cooperatively address important issues of social justice and racial equity. (Figure 4)

Individuals who reported living in places with greater community cohesion exercised more.

Safe Routes Benefits for Communities



REDUCTION OF VIOLENCE

Neighborhood violence can deter students from walking and biking to school. An increase in community cohesion is associated with a reduced occurrence of violent incidents in the community. Safe Routes programs can be directly associated with violence prevention against children and can improve safety initiatives in higher need communities. Safe Routes programs, such as walking school buses and corner captains, are designed to address bullying and gang harassment, while increased presence of people or "eyes on the street" along school routes can improve safety in the community. (McDonald, Steiner, Palmer and Bullock, 2014)

Safe Routes programs can play a role in reducing violent occurrences in communities as shown in the following examples:

1. Walking School Bus

- A walking school bus is a group of children walking together to and from school with adult supervision, usually picking up more children at predetermined stops along the route.
- At Washington Elementary School in San Jose, CA, a walking school bus was started in response to a fatal stabbing. The volunteers in the organization scout the neighborhood for children walking alone and accompany them. The group has been successful in changing the built environment along the routes. They provide recommendations to the city's engineering department and coordinate monthly cleanup events to report and remove graffiti and litter, while also encouraging the community to get involved.

2. Corner Captains

- This program increases the safety of students walking to and from school by ensuring adult supervision from their homes and businesses along the route.
- Philadelphia's Fourth District developed a system to provide safe corridors for students. This collaborative effort between school officials, law enforcement, transportation officials, community advocates, and parents secured pathways for students on their way to and from school and created safe havens for students when violent incidents occur.

3. Safe Havens

- Safe havens are businesses that can provide a safe place for students to step inside if they face harassment or bullying.
 Safe havens provide an adult presence and assistance for traveling youth.
- In Cedar Rapids, lowa, the fire department partnered with the police department and local neighborhood groups to create the 'Safe Spot' Program. Businesses and civic buildings can become 'Safe Spots' by providing a place of refuge and assistance to children if they feel unsafe or threatened while walking or bicycling in the community.

4. Safe Passages

- As the name suggests, the goal of the Safe Passages program is to create a safe passage to and from school and monitor the routes. Volunteers, community members, or professional security can be hired to monitor the safe passageway and to inform law enforcement or intervene in potentially violent situations.
- Chicago has one of the most extensive Safe Passages programs consisting of approximately 1,200 paid workers. A 20 percent decline in criminal incidents, a 27 percent decline in bullying, and a 7 percent increase in high school attendance were noted over a two-year period.
- In the Boyle Heights neighborhood of Los Angeles, Proyecto Pastoral, a community-building organization, is leading the Pasos Seguros (Safe Passages) program. Pasos Seguros is a comprehensive approach that addresses many factors hindering walking and bicycling, such as lack of infrastructure, traffic congestion, and illegal activities like drugs, gangs, and theft. The program enhances community cohesion by hosting walk audits, community walks, and bike rides.

RECOMMENDATIONS & RESEARCH

This report represents a first step in the examination of Safe Routes programming and its influence on community cohesion. While this report clearly articulates Safe Routes programs' contributions to the mutually reinforcing relationship between physical activity, social interaction, and community cohesion, there are additional areas of impact that deserve further scrutiny.

Recommendations for future research and action include:

- Explore the roles social justice and racial equity play in community cohesion, as well as the ways in which Safe Routes programs contribute to a cultural climate that allows communities to collectively discuss and address issues of social justice and racial equity
- Create a Safe Routes Racial Equity Analysis Report that identifies race-based barriers to safe walking and bicycling, such as institutional racism, as well as opportunities to improve equity in Safe Routes programs
- Conduct additional research on racial disparities in health and their relation to Safe Routes programs, social justice, and community cohesion
- Provide more information and training on programs that enhance community cohesion like corner captains and walking school buses
- Disseminate information on organized programs that increase presence on streets to support walking and biking to school

REFERENCES

Broyles, S., Mowen, A., Theall, K., Gustat, J., & Rung, A. (2011). Integrating Social Capital Into a Park-Use and Active-Living Framework. American Journal Of Preventive Medicine, 40(5), 522-529. doi: 10.1016/j.amepre.2010.12.028

Cradock, A., Kawachi, I., Colditz, G., Gortmaker, S., & Buka, S. (2009). Neighborhood social cohesion and youth participation in physical activity in Chicago. Social Science & Medicine, 68(3), 427-435. doi: 10.1016/j.socscimed.2008.10.028

Cramm, J., van Dijk, H., & Nieboer, A. (2012). The Importance of Neighborhood Social Cohesion and Social Capital for the Well Being of Older Adults in the Community. The Gerontologist, 53(1), 142-152. doi: 10.1093/geront/gns052

Kesting, S., Weeber, P., Schönfelder, M., Renz, B., Wackerhage, H., & von Luettichau, I. (2020). Exercise as a Potential Intervention to Modulate Cancer Outcomes in Children and Adults?. Frontiers In Oncology, 10. doi: 10.3389/fonc.2020.00196

Kingham, S., & Ussher, S. (2007). An assessment of the benefits of the walking school bus in Christchurch, New Zealand. Transportation Research Part A: Policy And Practice, 41(6), 502-510. doi: 10.1016/j.tra.2006.11.008

Lin, E., Witten, K., Oliver, M., Carroll, P., Asiasiga, L., Badland, H., & Parker, K. (2017). Social and built-environment factors related to children's independent mobility: The importance of neighbourhood cohesion and connectedness. Health & Place, 46, 107-113. doi: 10.1016/j.healthplace.2017.05.002

Molitor, F., Rossi, M., Branton, L., & Field, J. (2011). Increasing social capital and personal efficacy through small-scale community events. Journal Of Community Psychology, 39(6), 749-754. doi: 10.1002/jcop.20452

Neuwelt, P., & Kearns, R. (2006). Health Benefits of Walking School Buses in Auckland, New Zealand: Perceptions of Children and Adults. Children, Youth And Environments, (16(1), 104-120.

Turner, L., Slater, S., & Chaloupka, F. (2014). Elementary School Participation in Safe Routes to School Programming is Associated with Higher Rates of Student Active Travel to School - A BTG Research Brief. Chicago, IL: Bridging the Gap Program, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago.

Salahuddin, M., Nehme, E., Ranjit, N., Kim, Y., Oluyomi, A., & Dowdy, D. et al. (2016). Does Parents' Social Cohesion Influence Their Perception of Neighborhood Safety and Their Children's Active Commuting to and From School?. Journal Of Physical Activity And Health, 13(12), 1301-1309. doi: 10.1123/jpah.2016-0148

Sorj, B., & Martuccelli, D. (2011). Social Cohesion. In International Encyclopedia of Political Science (p. 2). Thousand Oaks: SAGE publications, Inc.

Springer, A., Cuevas Jaramillo, M., Ortiz Gómez, Y., Case, K., & Wilkinson, A. (2016). School social cohesion, student-school connectedness, and bullying in Colombian adolescents. Global Health Promotion, 23(4), 37-48. doi: 10.1177/1757975915576305

Waygood, E., & Friman, M. (2015). Children's travel and incidental community connections. Travel Behaviour And Society, 2(3), 174-181. doi: 10.1016/j.tbs.2015.03.003

Yip, C., Sarma, S., & Wilk, P. (2016). The association between social cohesion and physical activity in canada: A multilevel analysis. SSM - Population Health, 2, 718-723. doi: 10.1016/j.ssmph.2016.09.010

Zhu, X., Yu, C., Lee, C., Lu, Z., & Mann, G. (2014). A retrospective study on changes in residents' physical activities, social interactions, and neighborhood cohesion after moving to a walkable community. Preventive Medicine, 69, S93-S97. doi: 10.1016/j.ypmed.2014.08.013

Quinn, T., Wu, F., Mody, D., Bushover, B., Mendez, D., Schiff, M., & Fabio, A. (2019). Associations Between Neighborhood Social Cohesion and Physical Activity in the United States, National Health Interview Survey, 2017. Preventing Chronic Disease, 16, 1-11. doi: 10.5888/pcd16.190085

Begert, T., Müller, C., & Bless, G. (2017). The development of social cohesion in classrooms over one school year. Presentation, Université de Fribourg.

Fotopoulou, E., Zafeiropoulos, A., & Alegre, A. (2019). Improving Social Cohesion in Educational Environments Based on A Sociometric-Oriented Emotional Intervention Approach. Education Sciences, 9(1), 24. doi: 10.3390/educsci9010024

Juvonen, J., Yueyan Wang, & Espinoza, G. (2010). Bullying Experiences and Compromised Academic Performance Across Middle School Grades. The Journal Of Early Adolescence, 31(1), 152-173. doi: 10.1177/0272431610379415

Oder, E. (2005). The Social Cohesion Role of Educational Organizations: Primary and Secondary Schools. Peabody Journal Of Education, 80(4), 78-88. doi: 10.1207/s15327930pje8004_6

Patchin, J. (2020). Millions of Students Skip School Each Year Because of Bullying. Retrieved 13 April 2020, from https://cyberbullying.org/millions-students-skip-school-year-bullying

Thornton, C., Miller, P., & Perry, K. (2019). The impact of group cohesion on key success measures in higher education. Journal Of Further And Higher Education, 44(4), 542-553. doi: 10.1080/0309877x.2019.1594727

Community Violence: The Effects on Children and Teens. (n.d.). Retrieved from https://www.ptsd.va.gov/understand/types/community_violence_child.asp

Preventing Violence Among High-Risk Youth and Communities with Economic, Policy, and Structural Strategies. (2016). Retrieved 14 May 2020, from https://www.cdc.gov/mmwr/volumes/65/su/su6501a9.html

Community Cohesion as a Transport Planning Objective. https://vtpi.org/cohesion.pdf

Webadmin. (n.d.). Official Site of The State of New Jersey. Retrieved from https://nj.gov/transportation/community/srts/programs.shtm

In U.S., New Data Show Longer, More Sedentary Commutes - Population Reference Bureau. (2020). Retrieved from https://www.prb.org/us-commuting/

Westman, J., Friman, M., & Olsson, L. (2017). What Drives Them to Drive?—Parents' Reasons for Choosing the Car to Take Their Children to School. Frontiers In Psychology, 8. doi: 10.3389/fpsyg.2017.01970

Lieberman, M. and Zimmerman, S., 2015. Taking Back The Streets And Sidewalks. How Safe Routes To School And Community Safety Initiatives Can Overcome Violence And Crime. [online] Apha.org. Available at:

https://apha.org/~/media/files/pdf/topics/environment/srts_violence_report_20 15.ashx.

Community Cohesion and Violence Prevention - Let's Get Healthy California. (n.d.) Retrieved from https://letsgethealthy.ca.gov/community-cohesion-violence-prevention/

SRTS Guide: History of Safe Routes to School. Retrieved from http://guide.saferoutesinfo.org/introduction/history_of_srts.cfm

McDonald NC, Steiner RI, Palmer WM, Bullock, aN, Sisiopiku, VP, lytle BF. Costs of school transportation: quantifying the fiscal impacts of encouraging walking and bicycling for school travel. Transportation. 2 014; d o i:10 .10 07/s11116- 014- 9 5 6 9-7.25

Muennig Pa, Epstein M, Li g, DiMaggio C. The cost-effectiveness of New York City's Safe Routes to School Program. Am J Public Health. 2014;104(7):1294-1299

Brachman, M., & Church, R. (2019). Optimizing Safe Routes to School. Socio-Economic Planning Sciences, 67, 26-33. doi: 10.1016/j.seps.2018.08.003

Ragland, DR, Pande, S, Bigham, J, Cooper, JF. 2013. Ten Years Later: Examining The Long-Term Impact Of The California Safe Routes To School Program https://escholarship.org/uc/item/8m59g6vx

Stewart O, Moudon AV, Claybrooke C. Multistate evaluation of Safe Routes to School Programs. Am J Health Promotion 2014;28(Suppl 3):S89-96.

Candle, Ted. (2001). Community Cohesion: A Report of the Independent Review Team. Retrieved from: https://dera.ioe.ac.uk/14146/1/communitycohesionreport.pdf

Zhu, X, Yu, C, Lee, C. Lu, Z. 2020. From Walkable Communities to Active Lifestyles: Exploring Causal Pathways through a Case Study in Austin, Texas https://journals.sagepub.com/doi/pdf/10.1177/0739456X19900528